

REMARKS

Claims 1-17 and 19-24 remain pending in the application. The applicant has canceled claim 18 and added claims 25 and 26. What distinguishes added claim 25 from the prior art is that it recites an exhaust system that includes separate exhaust valves that are connected to each expandable chamber, respectively. What distinguishes added claim 26 from the prior art is that it depends from an allowable base claim.

The Office Action rejects claim 1 and dependent claims 5 and 9 under 35 U.S.C. § 102(b) as being anticipated by Fujimoto et al (US5611772). The Office Action also rejects claim 1 and dependent claims 5-8, 15, 17, 18, 20, 22, and 24 under 35 U.S.C. § 102(b) as being anticipated by Gillen et al (US5211162). The Office Action further rejects claim 1 and dependent claims 16 and 20 under 35 U.S.C. § 102(b) as being anticipated by Cone et al (US5591200). According to the Office Action, Fujimoto et al, Gillen et al, and Cone et al each disclose every limitation of the invention recited in claim 1; Fujimoto et al and Gillen et al each disclose every limitation of the invention recited in claim 5; Fujimoto et al disclose every limitation of the invention recited in claim 9; Gillen et al and Cone et al disclose every limitation of the invention recited in claim 20, Gillen et al disclose every limitation of the invention recited in claims 6-8, 15, 17, 18, 22, and 24; and Cone et al disclose every limitation of the invention recited in claim 16.

In response to the prior art cited against these claims in the outstanding US office action, and further in view of additional prior art cited by the European Patent Office (and cited in an Information Disclosure Statement filed 4 June 2004, the applicant has amended claim 1 to recite that the outflow of fluid from each of the previously inflated expandable chambers is achieved by causing the exhaust system to actively draw fluid from those chambers.

Consequent to this amendment, the applicant has canceled claim 18, which recited the step of providing an exhaust system configured to actively evacuate chambers by drawing fluid from them, which is similar to the limitation the applicant has added to claim 1.

Of the three documents that the action cites as 102(b) references, the only document that the action identifies as disclosing "an exhaust system configured to actively evacuate chambers . . ." is Gillen et al. The applicant agrees that neither of the other two documents, Fujimoto et al, or Cone et al. disclose active evacuation. Accordingly, the applicant maintains that neither Fujimoto et al nor Cone et al anticipates the amended claim 1, nor dependent claims 5, 9, 16, or 20.

With regard to Gillen et al, the action specifically identifies the exhaust port of solenoid valve 21V as being the element that, according to Gillen et al, is configured to "actively" evacuate chambers. In response, the applicant maintains that while the opening of an exhaust port *allows* pressurized fluid to escape, it's not accurate to say that the opening of the exhaust port actually *evacuates* the chamber. It's the pressure differential that evacuates the chamber. Opening the exhaust port merely *allows* the pressure differential to evacuate the chamber. If there were no pressure differential, opening the exhaust port would not result in any degree of evacuation.

Moreover, the relevant limitation in amended claim 1 (as well as in canceled claim 18) describes more than just evacuation. It also describes fluid as being "drawn" from the chambers. This contrasts with the function of solenoid valve 21V, which is only capable of *releasing* – not *drawing* – fluid from chambers. The distinction is important to the applicant since, as stated in the specification:

"The deflate is produced when a valve 26' is closed to one of the expandable chambers when the exhaust valve 34' connected to the one of the expandable chambers is opened and the pump 12a' is energized to produce a rapid

movement of fluid from the expandable chamber that is being exhausted.

Such inflow and outflow patterns produces *a direct and concentrated inflate and deflate at each of the respective expandable chambers in accordance with massage indexes to be described.*" (See page 8, lines 25-31 in the specification)(emphasis added).

Therefore, Gillen et al also do not anticipate the amended claim 1 or dependent claims 5-8, 15, 17, 18, 20, 22, or 24. Neither does anything in the prior art of record suggest that an exhaust system be caused to actively draw fluid from seating chambers. In fact, Gillen et al teach a method in which chambers are inflated for a preselected time and then "permitted to deflate." (see column 3, line 13).

The Office Action rejects claims 2, 3, 12-14, and 21 under 35 U.S.C. § 103(a) as being unpatentable over Gillen in view of Gray et al (US6159172).

Regarding claims 2 and 21, according to the Office Action, it would have been obvious to modify Gillen to include separate inlet and exhaust valves for each expandable chamber as Gray discloses. The Action supports this obviousness determination by citing the holding in Nerwin v. Erlichman that constructing a formerly integral structure in various elements involves only routine skill in the art. However, unlike the integral structure in Nerwin v. Erlichman, the assignment of the intake and exhaust functions to separate valves, as claimed, significantly alters the function and capabilities of the system. Specifically, it allows for quicker reversals between inflation and deflation. Quicker reversals are possible because the use of two valves allows inflation and deflation steps to overlap in such a way that fluid is actually being drawn or released from a cell as the inflation of the cell is still in the process of being stopped – and *vice versa*. Accordingly, the applicant maintains that Nerwin v. Erlichman is distinguishable on its facts and its holding is inapplicable here.

The action also argues that applicant has admitted to the non-criticality of valve design choice by stating that the valves "can be solenoid operated valves." The applicant maintains that, at most, the applicant's statement on page 10, lines 5-6 of the specification might be construed as admitting to the non-criticality of the selection of what *type* of valves are to be used. In no way can this statement be fairly construed as admitting that the use of separate intake and exhaust valves is non-critical.

For these reasons, and because claims 2 and 21 depend on an allowable base claim, the applicant maintains that claims 2 and 21 are patentable over the cited references.

The applicant likewise maintains that claims 3, 12, and 14 are patentable over the cited reference because all three of these claims depend from an allowable base claim.

The Office Action rejects claims 4 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Gillen/Gray in view of Takeuchi (US4622706). According to the Office Action, it would have been obvious to modify Gillen/Gray to include an exhaust pump as taught by Takeuchi "to forcibly and quickly discharge the air out of the air bags when needed."

The Applicant maintains that the Office Action would not have reached this conclusion with regard to claims 4 and 19 had it analyzed the situation in accordance with controlling legal authority. It's well settled that, to support an obviousness determination, one must show why a skilled person, confronted with the same problem as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. The courts have held that an examiner, to support an obviousness finding, must show a motivation to combine the references that create the case of nonobviousness. See, e.g., *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457-1458 (Fed. Cir. 1998). This motivation to combine may be found either in prior art teachings, the knowledge of persons of ordinary skill in

the art, or in the nature of the problem solved. Id at 1458. Instead, the present Office Action stops short of the proper analysis by merely reciting an *advantage* that the incorporation of an exhaust pump would realize, i.e., the ability "to forcibly and quickly discharge the air out of the air bags when needed." If the ability to identify or think up an advantage were sufficient to supply a motivation to combine, then, because there is at least some advantage to almost all claimed combinations, the test would be useless. The PTO could routinely identify claimed elements in the prior art, observe that there was an advantage in combining them as recited in the claims, and simply reject the claims on that basis. The mere existence of an advantage would almost always prevent patentable inventions.

Although motivation need not be found by identifying an *explicit* teaching or suggestion in all cases, it's not enough to simply identify an advantage. There must *at least* be some *implicit* teaching or suggestion in the prior art or general knowledge that would have motivated one skilled in the art to combine the references. In re Oetiker, 24 USPQ2d 1443, 1446-1447 (Fed. Cir. 1992); In re Rouffet at 1458 (motivation may be found in "the nature of the problem to be solved . . ."). However, to show that there's an implicit suggestion, the Examiner must show that one skilled in the art would know to use a prior art teaching to solve the problem that the Applicant sought to solve through the invention in question. In re Oetiker at 1446-1447. For this to be the case the examiner must show that the problem that the invention solves is the same as or at least similar to the problem that the prior art teaching solves. Again, it's not sufficient to merely identify an advantage that the combination would realize.

The problem that the invention solves by incorporating an exhaust pump is the problem of how to provide a more concentrated massage while repeatedly and alternately inflating and deflating expandable chambers within a seat cushion (See page 8, lines 25-31 in the specification).

In contrast, the problem that Takeuchi solves by employing an exhaust pump is the problem of how to insure that tubular air bags in an air mattress are "perfectly deflated," to discharge "the whole amount of air in the tubular air bags" (See column 11, lines 26-32 of the Takeuchi specification).

In light of the significant difference between the problems solved by the prior art and the invention, the applicant maintains that there is not even an *implied* teaching or suggestion that would have motivated one skilled in the art to combine the references. For this reason, the applicant maintains that claims 4 and 19 are patentable over Gillen/Gray in view of Takeuchi.

The Office Action rejects claims 10, 11, and 13 under 35 U.S.C. § 103(a) as being unpatentable over Gillen. The applicant maintains that these claims are patentable over the cited prior art because they all depend from an allowable base claim.

The Office Action rejects claim 23 under 35 U.S.C. § 103(a) as being unpatentable over Gillen in view of Takeuchi (US4622706). According to the Office Action, it would have been obvious to modify Gillen to include an exhaust pump as taught by Takeuchi "to forcibly and quickly discharge the air out of the air bags when needed." The applicant maintains that the obviousness analysis set forth in the office action is improper for the same reasons as set forth with regard to the rejection of claims 4 and 19 under 35 U.S.C. § 103(a). When the correct obviousness analysis is applied, the applicant maintains, for the same reasons set forth with regard to claims 4 and 19, that claims 10, 11, and 13 are patentable over Gillen in view of Takeuchi.

Please enter the amendments under the provisions of 37 CFR §1.116 and reconsider claims 1-17 and 19-24 and consider new claims 25 and 26 in view of the foregoing amendments and remarks.

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I authorize the Assistant Commissioner to charge any deficiencies, or credit any overpayment associated with this communication to Deposit Account No. 50-0852. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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